REMARKS

Entry of the above-noted amendments, reconsideration of the application, and allowance of all claims pending are respectfully requested. By this amendment, claim 39 is amended. These amendments to the claims constitute a bona fide attempt by applicant to advance prosecution of the application and obtain allowance of certain claims, and are in no way meant to acquiesce to the substance of the rejections. Support for the amendments can be found throughout the specification, figures, and claims. Claims 1, 6-17, and 39-40 are pending.

Claim Rejections - 35 U.S.C. §112:

Claim 39 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 39 has been amended to correct a typographical error.

Withdrawal of the § 112 rejection is therefore respectfully requested.

Claim Rejections - 35 U.S.C. §103(a)

Claims 1, 6-17, 39, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chellali et al. (U.S. Patent No. 6,201,830; Chellali) in view of Chen (U.S. Patent No. 5,970,088). This rejection is respectfully, but most strenuously, traversed.

Applicants respectfully submit that the Office Action's citations to the applied references, with or without modification or combination, assuming, *arguendo*, that the modification or combination of the Office Action's citations to the applied references is proper, do not teach or suggest one or more elements of the claimed invention, as further discussed below.

For explanatory purposes, applicants discuss herein one or more differences between the Office Action's citations to the applied references and the claimed invention with reference to one or more parts of the applied references. This discussion, however, is in no way meant to acquiesce in any characterization that one or more parts of the Office Action's citations to the applied references correspond to the claimed invention.

Applicants respectfully submit that the Office Action's citations to the applied references do not teach or suggest one or more elements of the claimed invention. A careful reading of the Office Action's citations to the applied references fails to teach or suggest, for example, the pilot branch for communicating with the first digital subscriber line data device via pilot signals when the first digital subscriber line data device is in a sleep mode; the data branch for providing data communications between the first digital subscriber line data device and the network switch when the first digital subscriber line data device is active; the controller circuit for monitoring the pilot signals and for switching the first digital subscriber line data device from the pilot branch to the data branch when the first digital subscriber line data device becomes active based on the pilot signals; wherein the controller circuit comprises a crosspoint device for switching the first digital subscriber line data device from the pilot branch to the data branch and for switching the second digital subscriber line data device from the data branch to the pilot branch when the first digital subscriber line data device is switched from the pilot branch to the data branch in response to the controller, as recited in applicant's independent claim 1.

Chellali discloses (column 4, lines 26-53; FIG. 4) a system for providing data communications between a first DSL data device and a network switch:

> The transmitter first determines the presence of idle data to be transmitted and initializes the transition to the low-complexity mode, selecting the second path by setting switch SW1 in position

> B. The transmitter must indicate this transition to the receiver using the pilot tone so that full-complexity decoding is not applied. The receiver must recognize from the pilot tone that idle data is being transmitted and set switch SW2 in position B. In the transmitter, the scrambler, FEC, interleaver, constellation encoding and IDFT operations are eliminated. In the receiver, the descrambler, FEC, de-interleaver, constellation decoding and DFT are eliminated. The eliminated transmit and receive operations result in considerable savings in power consumption and computational complexity for the modem.
>
> The following steps embody a preferred method for implementing the technique:
>
> i) Generate random data using the PN signal generation.
>
> ii) Remove the component in tone 64 from the PN signal.
>
> iii) Add the pilot data to tone 64 of the PN signal.
>
> iv) Flip the phase of the pilot tone (rotate phase by 180 degrees).
>
> The receiver will detect the phase inversion of the pilot, thus recognizing that the received data is idle data and full decoding need not be applied. Hence, the receiver will set switch SW2 to position B so that the received data propagates through the path with lowest complexity.

Chellali discloses use of a pilot tone for a DSL system. The Office Action's citation to Chellali fails to disclose a controller circuit for monitoring the pilot signals and the crosspoint device for switching the first DSL data device from the pilot branch to the data branch when the first DSL data device becomes active based on the pilot signal. Simply missing from the Office Action's citation to Chellali is any mention of the pilot branch for communicating with the first digital subscriber line data device via pilot signals when the first digital subscriber line data device is in a sleep mode; the data branch for providing data communications between the first digital subscriber line data device and the network switch when the first digital subscriber line data device is active; the controller circuit for monitoring the pilot signals and for switching the first digital subscriber line data device from the pilot branch to the data branch when the first

digital subscriber line data device becomes active based on the pilot signals; wherein the controller circuit comprises a crosspoint device for switching the first digital subscriber line data device from the pilot branch to the data branch and for switching the second digital subscriber line data device from the data branch to the pilot branch when the first digital subscriber line data device is switched from the pilot branch to the data branch in response to the controller, as recited in applicant's independent claim 1. This point is even conceded by the Office Action (paragraph 4, page 3):

> Chellali does not teach a controller circuit for monitoring the pilot signals and for switching the first DSL data device from the pilot branch to the data branch when the first DSL data device becomes active based on the pilot signal and a cross-point device for switching the first DSL data device from the pilot branch to the data branch and switching the second DSL device from the data branch to the pilot branch when the first DSL data device is switched from the pilot branch to the data branch in response to the controller; and wherein the controller circuit monitors operations of the second device and, based on the monitored operation, instructs the cross-point device to switch the second device.

So, the Office Action's citation to Chellali fails to satisfy at least one of the limitations recited in applicants' independent claim 1.

The shortcomings of the Office Action's citation to Chellali relative to certain elements of the claimed invention have been discussed above. The Office Action proposes a combination of the citation to Chellali with a citation to Chen. However, the Office Action's citation to Chen does not overcome the deficiency of the Office Action's citation to Chellali. Applicants respectfully submit that the proposed combination of the Office Action's citation to Chellali with the Office Action's citation to Chen fails to provide the required approach, assuming, *arguendo*, that the combination of the Office Action's citation to Chellali with the Office Action's citation to Chen is proper.

Chen discloses (column 9, lines 22-53; FIG. 2b) a central office that monitors a DSL output for activity:

> FIGS. 2b-c illustrate alternative central office connections to subscriber lines with DSL modems: each subscriber line has a DSL AFE (analog front end) and a digital switch connects an AFE output to a DSL processor, either a DSP similar to the DSP in the residence modem or a single DSP for multiple AFEs. The central office monitors the AFE outputs and a digital switch assigns an available DSP to communicate with the corresponding residence DSL modem. The central office polls the AFEs to find active modems in the residences. As FIGS. 2b-c show, the central office DSL modem connects to a remote access server on a local area network with packetized information (e.g., Internet) or a wide area network with constant bit rate data which is sent directly across the public switched telephone network trunk lines. The information sent by the residence modem would be identified or signaled via an out of band signaling method (e.g. similar to ISDN Q.931 signaling), rather than an off-hook signal, plus telephone number sent in the voice-band to the analog switching and line cards. FIG. 2c illustrates the major functional blocks of a central office DSL modem (the DSL band is already separated from the voice-band) as an AFE 240, DSP 260, Communications Controller 280 and ARM or RISC processor 290. The modem has a connection to both the constant bit rate transmissions (voice, video conferencing, etc.) being forwarded to a time division multiplexed (TDM) bus and packetized data (Internet, Intranet, private networks, etc.) being forwarded to a control bus (and then to the trunk lines). FIG. 2c depicts the terminology "xDSL" which may be ADSL or any other type of DSL modem. These various functions could be all performed in a single DSP 260.

Chen discloses the central office that monitors the DSL AFE for activity and assigns the active DSL AFE to the DSL processor. The Office Action's citation to Chen fails to disclose a controller circuit for monitoring pilot signals on the digital subscriber line and the crosspoint device for switching a first digital subscriber line from a pilot branch to a data branch (e.g. served by the DSL processor) when a first DSL data device becomes active based on the pilot signal and switching a second digital subscribe line from a data branch to a pilot branch. Simply

missing from the Office Action's citation to Chen is any mention of the pilot branch for communicating with the first digital subscriber line data device via pilot signals when the first digital subscriber line data device is in a sleep mode; the data branch for providing data communications between the first digital subscriber line data device and the network switch when the first digital subscriber line data device is active; the controller circuit for monitoring the pilot signals and for switching the first digital subscriber line data device from the pilot branch to the data branch when the first digital subscriber line data device becomes active based on the pilot signals; wherein the controller circuit comprises a crosspoint device for switching the first digital subscriber line data device from the pilot branch to the data branch and for switching the second digital subscriber line data device from the data branch to the pilot branch when the first digital subscriber line data device is switched from the pilot branch to the data branch in response to the controller, as recited in applicant's independent claim 1.

So, the Office Action's citation to Chen fails to satisfy at least one of the limitations recited in applicants' independent claim 1.

The Office Action's citations to Chellali and Chen both fail to meet at least one of applicants' claimed features. For example, there is no teaching or suggestion in the Office Action's citations to Chellali or Chen of pilot branch for communicating with the first digital subscriber line data device via pilot signals when the first digital subscriber line data device is in a sleep mode; the data branch for providing data communications between the first digital subscriber line data device and the network switch when the first digital subscriber line data device is active; the controller circuit for monitoring the pilot signals and for switching the first digital subscriber line data device from the pilot branch to the data branch when the first digital subscriber line data device becomes active based on the pilot signals; wherein the controller

circuit comprises a crosspoint device for switching the first digital subscriber line data device from the pilot branch to the data branch and for switching the second digital subscriber line data device from the data branch to the pilot branch when the first digital subscriber line data device is switched from the pilot branch to the data branch in response to the controller, as recited in applicants' independent claim 1.

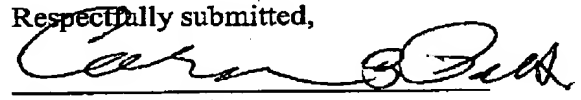
Furthermore, the Office Action does not allege that the art of record provides any teaching, suggestion, or incentive for modifying the citations to Chellali and/or Chen to provide the claimed configuration.

For all the reasons presented above with reference to claim 1, claim 1 is believed neither anticipated nor obvious over the art of record. The corresponding dependent claims are believed allowable for the same reasons as independent claim 1, as well as for their own additional characterizations.

Withdrawal of the § 103 rejections is therefore respectfully requested.

In view of the above amendments and remarks, allowance of all claims pending is respectfully requested. If a telephone conference would be of assistance in advancing the prosecution of this application, the Examiner is invited to call applicant's attorney.

Respectfully submitted,



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